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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR        | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|-----------------------------|---------------------|------------------|
| 10/586,603  | 07/20/2006  | Appukuttan Nair Sreekumaran | P-8924-US           | 5956             |
| 49443 7590 10/30/2009<br>Pearl Cohen Zedek Latzer, LLP<br>1500 Broadway<br>12th Floor<br>New York, NY 10036 |             |                             |                     |                  |
| EXAMINER  |             |                             |                     |                  |
| SAVAGE, MATTHEW O   |             |                             |                     |                  |
| ART UNIT  |             | PAPER NUMBER                |                     |                  |
| 1797  |             |                             |                     |                  |
| MAIL DATE   |             | DELIVERY MODE               |                     |                  |
| 10/30/2009  |             | PAPER                       |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/586,603

**Applicant(s)**

SREEKUMARAN ET AL.

**Examiner**

Matthew O. Savage

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinig, Jr..

With respect to claim 1, Heinig discloses silver deposited on activated alumina, the silver obviously being in the form of nanoparticles having a size up to 150 nm since it is in a colloidal form and is deposited on the alumina using a method that is similar to that disclosed in the instant specification (see lines 6-40 of col. 6).

Concerning claim 3, Heinig fails to specify the activated alumina and other substrates as being in the form of powder, however, such a modification would have been obvious in order to maximize the surface area of the adsorbent for a particular application.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiya et al.

With respect to claim 1, Kamiya et al disclose silver deposited on activated alumina, the silver obviously being in the form of nanoparticles having a size up to 150

nm since it is deposited on the alumina using a method that is similar to that disclosed in the instant specification (see from line 61 of col. 2 to line 19 of col. 3).

Concerning claim 3, Kamiya et al fail to specify the activated alumina as being in the form of powder, however, such a modification would have been obvious in order to maximize the surface area of the adsorbent for a particular application.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan.

With respect to claims 1-2, Yan discloses gold and silver deposited on activated alumina (see from line 56 of col. 3 to line 16 of col. 4), the gold and silver obviously being in the form of nanoparticles having a size up to 150 nm since it is deposited on the alumina using a method that is similar to that disclosed in the instant specification (see lines 10-36 of col. 6).

Concerning claim 3, Yan fails to specify the activated alumina as being in the form of powder, however, such a modification would have been obvious in order to maximize the surface area of the adsorbent for a particular application.

Regarding claim 4, Yan includes activated carbon (see line 61 of col. 3).

Applicant's arguments filed 8-4-09 have been fully considered but they are not persuasive.

Applicant's argument that Heinig Jr., Kamiya et al, and Yan fail to disclose nanoparticles is not considered persuasive since the references disclose silver ions

and/or colloidal silver which have particle sizes that fall within the claimed range of "up to 150 nm".

Applicant's argument that the instantly claimed composition is made in a different way than the compositions disclosed by Heinig Jr., Kamiya et al, and Yan is noted but fails to apply since the composition claims fail to specify any process steps for making the composition and because applicant has not provided any evidence showing that such process steps would produce a product that was materially different from the products disclosed in the prior art.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew O. Savage whose telephone number is (571) 272-1146. The examiner can normally be reached on Monday-Friday, 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew O Savage/  
Primary Examiner  
Art Unit 1797

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